Math 357
Short quiz 03

2024–01–22 (M)

Your name: _____

(a) Let $(R, +, \times)$ be a commutative (!) ring. Define what it means for a subset $I \subseteq R$ to be an ideal. Define what it means for an ideal to be principal.

(b) Are the following ideals principal? Answer both; briefly justify at least one.

$(2, t)$ as an ideal of $\mathbf{Z}[t]$ $(2, t)$ as an ideal of $\mathbf{Q}[t]$